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Bulletin No. 6

Vocational Series No. 4

Vocational Education in Indiana

Information Relating to the Establishment
and Administration of State Aided
Vocational Schools

INDIANAPOLIS, INDIANA

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March, 1914

APPROVED BY
THE STATE BOARD OF EDUCATION

HIS 4 Act.

DEPARTMENT OF PUBLIC INSTRUCTION
VOCATIONAL DIVISION

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PREFACE.

The State Legislature of 1913, in response to a general demand for industrial, agricultural and household arts education, enacted a law which provides, among other things, for the organization and maintenance of vocational schools designed to give specific instruction to pupils over fourteen years of age desiring to prepare for profitable employment in the shop, in the home or on the farm. To stimulate and encourage this type of education special state aid has been provided for such vocational departments and schools as may be approved by the state board of education.

The present bulletin is intended to give to superintendents and local school boards, contemplating the establishment of such vocational schools, the help needed to enable them to organize and conduct the vocational work in accordance with the standards and principles approved by the state board of education. It contains a copy of the Vocational Education Law, the state board's interpretation of this statute, suggestions for putting the new law into effect, and the general principles and standards to be observed in passing upon schools applying for state aid. It also seeks to make clear the specific problem which the school people of the state are called upon to solve, and the relation of this new work to our past educational ideals and to our present school practices, and should be read as a whole.

In its preparation the publications of other state departments have been drawn upon quite freely. Much valuable help has been obtained from the general conferences of state directors of vocational education, organized by C. A. Prosser, Secretary of the National Society for the Promotion of Industrial Education, and from personal conferences with directors and teachers of vocational schools in a number of states. Special acknowledgments are due to Superintendent Charles A. Greathouse for constant encouragement and help; to President W. E. Stone, of Purdue University, J. G. Collicott, Superintendent of Schools, Indianapolis, and P. A. Reid, Richmond, Ind., members of a special committee of the state board of education, who assisted in the formulation of these principles, and to President R. L. Kelley, Earlham College, Superintendent J. N. Study, Ft. Wayne, and Superintendent J. G. Collicott, Indianapolis, members of the state board of education, for a critical reading and revision of the entire manuscript.

W. F. Book,
Deputy State Superintendent
In Charge Vocational Education.

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INTRODUCTION.

1. Problem of Vocational Education in Indiana

In considering the many problems which the development of vocational education in Indiana presents, it is important to keep in mind the fact that vocational education, as provided for in our Vocational Education Law, and as at present contemplated by the state board of education, does not represent a mere fad or a radical departure from past educational ideals and practices, but marks the culmination of an educational development which has extended through a period of one hundred years. The following quotation from our first State Constitution adopted in 1816 is significant:

“Whereas, knowledge and learning generally diffused through a community being essential to the preservation of a free government and spreading the opportunities and advantages of education through the various parts of a country being highly conducive to this end, it shall be the duty of the general assembly to pass such laws as shall be calculated to encourage intellectual, scientific and agricultural improvements throughout the state by allowing rewards and immunities for the promotion and improvement of all arts, sciences, commerce, manufacturing and natural history; and to countenance and encourage the principles of humanity, industry and morality.” To this end the general assembly was required to “provide by law for a general system of education, ascending in regular gradations from township rural schools to a state university, wherein tuition shall be gratis and equally free to all.”

These same principles were reaffirmed and endorsed by a vote of the people in 1851, when they ratified our present Constitution which contains the following significant clause: “Knowledge and learning, generally diffused throughout a community, being essential to the preservation of a free government, it shall be the duty of the general assembly to encourage by all suitable means, moral, intellectual, scientific and agricultural improvement, and to provide by law for a general and uniform system of common schools, wherein tuition shall be without charge, and equally open to all.” (Article 8, Sect. 1.)

In accordance with these principles we have developed in Indiana our present “*open-door*” system of public schools, ascending in regular gradations from the rural township school to the state

university, each department of which is open and equally free to every boy and girl in the state.

But the state has not been content to provide mere general educational opportunities for all. Some half a century ago the state began to make provision for special training in those fields of technical and professional education, where an increase in knowledge and skill would prove of special advantage to the state. Purdue University, which had for its controlling purpose the giving of instruction in agriculture and the mechanic arts to those preparing for leadership in these fields of work, was made a State institution in 1865. A State Normal School, to give special training to those who desired to prepare for the profession of teaching was established by the same legislature. Later a school of law, a department of education and school of medicine were established at Indiana University, where the young people of the state could get special instruction and training to fit themselves specifically for the professions of education, medicine or law.

The state has, therefore, for a number of years provided special vocational instruction for those who desire to fit themselves for the so-called higher professions. Our present Vocational Education Law merely contemplates the extension of this principle, so as to provide as definite and helpful a vocational training for the young people of the state who must work in the shop, in the home or on the farm for their livelihood, as has already been provided for those who desire to fit themselves for the professions of teaching, engineering, medicine or law. This latest step in our educational development, therefore, merely means an extension or enlargement of the work of our present system of public schools in accordance with the principles laid down by the founders of the state and our past ideals and practices. It represents an attempt to make our present system of free public schools more truly democratic by enlarging and extending the scope of its work so that by including this new line of work we may come more nearly meeting effectively and economically, the needs of *all* the people of the state. It means making education *vocational* and *productive* as well as *liberal* and *cultural*, and represents, on the part of the state, an attempt to conserve to society the talents and capacities of all our boys and girls.

In taking this advanced step it is important to keep clearly in mind just what our first task really is, and to realize from the beginning that the preparation for efficient and profitable employ-

ment in the shop, in the home, or on the farm involves the giving of instruction which is as specific and distinct in its purpose and methods from the so-called general or cultural education as the instruction now given in our best law and medical schools differs in method and aim from the work pursued in a general college course.

2. Provisions of the Vocational Education Law

The important constructive provisions of the Indiana Vocational Education Law may be briefly stated as follows:

(1) Instruction in practical arts subjects (agriculture, the industrial and household arts) must be offered as regular courses in the public schools of the state, instruction, more or less pre-vocational in character, designed to give the pupils in our regular schools a true knowledge of and appreciation for the more important occupations used by present-day society in accomplishing its work, and which, together with the academic work, should serve as a sort of vocational try-out course, enabling them to choose more wisely a permanent occupation or life work. (Sec. 5).

(2) County agents of agriculture may be appointed for each county in the state, whose duty it shall be to conduct practical farm demonstrations, organize boys' and girls' clubs, give advice to farmers on practical farm problems and so far as feasible aid the county superintendent of schools and the teachers in giving practical education in agriculture and domestic science; helping in every way possible to advance the cause of agriculture and country life throughout the state. (Sec. 12).

(3) "Any school city, town or township may, through its board of school trustees or school commissioners or township trustee, establish vocational schools or departments for industrial, agricultural and domestic science education in the same manner as other schools and departments are established and may maintain the same from the common school funds or from a special tax levy not to exceed 10 cents on each \$100 of taxable property, or partly from the common school funds and partly from such tax; such vocational departments and schools are designed to give specific vocational instruction to all persons over fourteen years of age who desire to fit themselves specifically for efficient and effective work in the shop, in the home and on the farm, and are to be encouraged and stimulated by the granting of special state aid for the work.

3. Purpose of This Bulletin

Our immediate task is to develop these three lines of work in the state. The present bulletin is devoted to giving information relating to the establishment and administration of the state aided vocational departments and schools referred to in paragraph three above.

II. THE FUNCTION AND WORK OF VOCATIONAL SCHOOLS

1. Purpose of the Vocational Education Law

The law set forth, in the first place, as clearly as possible the purpose of vocational education, as distinguished from general education and defines the different forms of vocational education which are to be encouraged by the granting of state aid. This is the purpose of the series of definitions contained in Section 1.

The chief purpose of the law, however, is to assist in the establishment and maintenance of the forms of vocational education and types of vocational schools defined by the law. This is the purpose of the state aid provided for the vocational work.

In principle the state proposes to enter into a *joint partnership* with the local community for the purpose of securing an effective plan of providing vocational training, such as would justify the expenditure of state money under the law.

2. Kind of Education to Be Encouraged by the Granting of State Aid

That some form of education different from the instruction now given in the public schools was contemplated by the law seems evident from the fact that the law provides for an apportionment of money separate and distinct from that appropriated for general education. Moreover, the law has clearly defined the kind of education which it wished to encourage. "Vocational education shall mean any education, the controlling purpose of which is to fit for profitable employment." (Section 1, Article 1.) The distinctive and differentiating purpose of vocational education, therefore, is to fit persons for profitable employment in a particular occupation.

a. Vocational Education Defined.

Vocational education as provided for in the Indiana Law may, therefore, for the sake of clearness, be defined as that form of education whose controlling purpose is to fit for useful and efficient service in the shop, in the home and on the farm, given only to persons who have already indicated their intention to enter such employment, or who are already engaged therein, and who wish to increase their efficiency in their chosen occupation.

b. Purpose of the Practical Arts Work in the Regular Schools.

The controlling purpose of the practical arts work specially provided for in Sec. 5 of the Vocational Education Law (the instruction in manual training and industrial arts, in elementary agriculture and domestic science), should be to give the pupils in our regular schools an acquaintance with the more important methods used by present day society in accomplishing its work. It should give such a knowledge *about* and appreciation *for* these fundamental industries as every citizen should have to fulfill his function as a citizen of the state, and as would enable the pupils in our regular schools to make a more intelligent choice of a future occupation or life work.

The practical arts work in the regular schools must be true to the occupations and industries studied the same as the vocational work, but the instruction does not seek primarily to prepare the pupil for some particular occupation or profession already selected and determined upon. It is designed to give the pupils in our regular schools an experience with a variety of industrial activities and should serve, in part, as a sort of vocational finding and "try-out" course, providing such knowledge and experience with the more important types of social activity as may be necessary to enable them to choose more wisely a specific occupation for which to prepare in a vocational school later on.

Other important distinctions are the following: The practical arts work is given in the regular schools, while the pupil continues his general education. The vocational work is given in a special school, where chief emphasis is laid on the preparation for a particular occupation. Even though the practical arts work in the regular schools should be conducted according to the latest and most approved commercial, farm or shop methods, so that pupils in these courses would be getting real typical experiences in these fields of work, as we hope may be the case, the work would still not be vocational because the vocational motive—"preparation for profitable employment in a particular occupation or field of work"—is lacking. Vocational education, which has for its controlling purpose the training of a boy or girl for a particular occupation, should not be undertaken in the regular school course, but should be given in a department or school created for that special purpose as our law provides.

These definitions and distinctions are important merely because

they will enable us to keep more clearly and definitely in mind just what we are attempting to do. They will, of course, not satisfy everybody as a definition of vocational and pre-vocational education, but they will prevent much confusion of thought if adhered to, and will insure greater efficiency in both the vocational and pre-vocational work, by making it easier to select the most helpful and necessary means for reaching the desired results.

3. Our Present Law Not a Complete Solution of the Problem

It may readily be seen from the above definitions and distinctions, that the vocational work for which state aid has been provided does not give us a complete solution of the vocational education problem in Indiana. We have merely selected a particular problem or field of vocational work upon which to begin. Of the following possible forms of vocational education (1) Agricultural, (2) Industrial, (3) Household arts, (4) Commercial, (5) Professional, (6) Higher technical, (7) Marine or nautical, state aid has been provided only for the first three kinds. Moreover, we have selected but a particular problem in the field of work taken up, namely: To provide vocational education for that large group of boys and girls who must go to work or begin to prepare specifically for a wage earning occupation, at 14 years of age, and to provide in Part-time and Evening classes, vocational instruction for those who have been obliged to go to work at an early age without specific training for the occupations in which they are engaged.

There are the very best of reasons for thus limiting our field of work in the beginning. The primary purpose of our legislation was to aid those necessary types of educational effort which would not, or could not be attempted without state aid. Commercial, professional and higher technical education were excluded on the ground that these forms of vocational education are already provided for in the state. Other problems in vocational education remain untouched by our present program of work and law. Some important phases of the vocational work, such as the pre-vocational work in the regular schools, vocational guidance, providing vocational education for those who expect to complete a high school course, the problem of the general evening school, which continues the general education of day laborers, must for the present, at least, be carried on by local communities without special encouragement or aid from the state. Other problems, such as are presented

by the general continuation school,¹ will require further consideration and perhaps further legislation when we have made a substantial beginning on the particular problems now in hand. The question is not whether the solution of the particular problems emphasized by our law completely meets the situation, but whether these problems are practicable and whether in general they meet a larger and more immediate need than other aspects of the vocational work that might have been taken up first. It would be very unwise to attempt to cover thoroughly the entire field of vocational education from the start, because it would be impossible either to finance such an undertaking or to find the men and women who could direct the work. For these and other reasons certain problems have been singled out by our law for special emphasis and consideration.

Our immediate task is to carry on the work mapped out by the present law. When this work is well under way we may with safety and profit extend the work to other fields of vocational education as rapidly as possible. In this important undertaking the co-operation and persistent endeavor of all business and laboring men, more particularly the school people of the state, is *absolutely* necessary to make the vocational work a success. The task cannot be fully achieved in three or four years, not at all, unless the department of public instruction and the state board of education can have the confidence and continued co-operation and support of all parties concerned.

4. Justification or Purpose of State Aid for Vocational Work

The principle of giving state aid for general and professional education represents an old and well-established practice in this state as already shown. The matter of providing vocational instruction for that large group of young people in the state who must begin to prepare specifically for some useful occupation at fourteen years of age was deemed of so much importance by the framers of our law that special state aid was provided to encourage local communities to take up the work. This type of vocational education is of peculiar state-wide benefit since it adds to the happiness and productive powers of a large and important group of future citizens and conserves to the state the full talents and capacities of this group of boys and girls. Moreover, this type of voca-

¹This type of school should not be confused with the part-time or trade continuation school sometimes also spoken of as a continuation school. The writer had in mind a school of the type of the continuation schools of Munich, Germany.

tional education must, comparatively speaking, always be expensive and so would scarcely be undertaken by local communities. It is also peculiarly a state and national problem since skilled workers often leave the communities where they were educated and go to other cities and states where they find a better market for their labor and skill. For this reason Grand Rapids, Mich., may profit by the skilled labor of workmen trained in Cincinnati, Ohio.

For these and other reasons the principles of providing state aid to stimulate local communities to take up new and necessary kinds of training and service to childhood which are particularly beneficial to the state or country as a whole has become a fixed principle in American education.

The following principles have been adopted by the English Government after two centuries of experience with the problem of public education, as the basis of its authority for making state grants to new educational endeavors in local communities:

1. "For any equitable mitigation of the inequalities of burden."
2. "To secure efficient authority for the necessary supervision and control by the state government, to make the work economic and effective."
3. "To encourage the kind of expenditure most desirable in the interests of the community as a whole."
4. "To make it possible to attain to anything like a universal enforcement of a standard minimum of education for industrial workers so earnestly desired and so absolutely essential to industrial supremacy."

5. Forms of Vocational Education That May Be State Aided

In order that there might be a clear understanding as to the forms of vocational education which were to be stimulated by the granting of state aid, the law has set up a series of definitions indicating the kinds of vocational education and the different types of departments and schools which might be approved by the state board of education for state aid.

- (1) The vocational instruction to be given must be of less than college grade and meet the vocational needs of persons over fourteen years of age who are able to profit by the instruction offered.
- (2) It is limited to the following three forms of vocational education: Industrial, agricultural and "domestic science," as defined by the law.

a. Industrial Education: This includes, besides the trades, crafts and industries open to boys and men, "occupations of girls and women carried on in stores, workshops and other establishments." This extension of the field of industrial education is important, since it covers such industrial instruction as may be needed by girls and women to help in their daily work as clerks; their daily work in such establishments as a textile plant, a box, candy, or clothing factory, a millinery or dressmaking shop. That is to say, other forms of work for women and girls besides the occupations connected with the household, are recommended as having a legal claim for state aid. (Sec. 1, Art. 2.) This article of the law is, however, not to be interpreted as including commercial training in high schools or in separate vocational schools. Vocational schools or departments organized to give instruction in salesmanship to men and women working in stores may, however, be state aided under the law.

b. Agricultural Education: Vocational education in agriculture contemplates the training of boys and men for efficient service on the farm and is defined by the law as "That form of vocational education which fits for the occupations connected with the tillage of the soil, the care of domestic animals, forestry and other wage earning or productive work on the farm."

There is an intimate relation between training boys for efficient service on the farm and the courses which fit girls for the duties of the home in rural communities. The latter is included under "Domestic science" education, which prepares for all occupations connected with the household.

c. "Domestic Science" Education is defined by the law as "that form of vocational education which fits for the occupations connected with the household." Since the dominant aim of vocational education is to prepare for useful and efficient service in some field of profitable employment, the kind of training in domestic science for which state aid can be given is that which prepares girls and young women specifically for more efficient and profitable service, either as a manager of a household, an assistant in the household, a waitress or cook or any other occupation connected with the household, whether this service be rendered in their own or in the home or shop of another.

III. KINDS OF VOCATIONAL SCHOOLS THAT MAY BE ESTABLISHED

The law distinguishes three types of State aided vocational departments or schools. (1) The Day school or Department. (2) The Evening class. (3) Part-time classes. In each of these types of school one or more of the three forms of education, industrial, agricultural and domestic science, as defined above, may be given.

Though differing in name and plan, the general purpose of each of these different types of school is the same, namely: To train young people for profitable employment in the shop, in the home or on the farm. It should be clearly understood from the beginning that these schools are not intended or planned for the accommodation of backward, deficient, incorrigible or other subnormal pupils, but that they are designed to give a thorough vocational training to healthy normal individuals who wish to prepare for efficient and profitable employment in one of these fields of work. The selection of the particular type of vocational school which a given community should establish, will, in general, depend upon the needs and conditions to be met in that community.

1. All-Day Vocational Schools

The law defines a vocational school or department as "an organization under a separate director or head, of courses, pupils and teachers approved by the State Board of Education, designed to give either industrial, agricultural or domestic science education" as defined in the law. This means that a vocational department or school must be separately organized and different in its course of study, methods and aim from our regular schools. The controlling purpose of the vocational class or school must be "to fit for profitable employment in the home, in the shop or on the farm."

There are two ways in which all-day vocational schools may be organized. (1) As a *separate* school. (2) As a distinct department of another school.

(1) As a Separate School: When organized as a separate school the work would be in a separate building, not used for general school purposes. It would have a separate organization of courses, pupils and teachers under its own director or head and be entirely separate and distinct from any other school. Such a separate vocational school would, nevertheless, be under direct con-

trol of the superintendent and school board of the city or district organizing and maintaining the school, as all vocational work is to be made an integral part of the work of our public school system.

(2) **As a Department of Another School:** When organized as a department of another school the vocational work must be organized separately and independently of the regular school work. There must be a separate director or head for the vocational work, upon whom will depend the success of the work; a separate course of study, group of teachers and pupils, but the work would be carried on in the same building with another school, using part of the rooms and equipment of such school for the vocational work. Such vocational department must have a sufficient number of vocational and technical teachers to teach all the vocational and technical subjects in the course. A portion of the related academic work, English, industrial history, and, in special cases, some of the technical work in mathematics, practical science and drawing may be taught by teachers in the regular school, provided such teachers have the vocational point of view and are able to appeal to the interests and needs of their pupils.

Whether vocational education is conducted in a separate building or under the same roof as general education is not necessarily of vital importance. It is, however, absolutely necessary, if state aid be given that the vocational work be so carried on that it may realize its dominant aim of "fitting for useful employment in the shop, in the home or on the farm." If the vocational work is organized under the first plan, the local community will have established a presumption in favor of efficient work in the eye of the department. Vocational departments in existing day schools have not as yet demonstrated their effectiveness as compared with separately organized schools.

a. Kinds of All-Day Schools That May Receive State Aid.

The following kinds of all-day vocational department or school will be approved by the state board of education if satisfactory as to organization, courses of study, qualifications of teachers, equipment, methods of instruction, etc.

(1) **The All-Day Industrial School** is designed to give instruction in preparation for particular occupations connected with the industries or trades. In these schools a close relation must be maintained between theory and practice. There will be no general departments of arts or sciences, no systematic work in mathematics

or drawing. The academic work necessary for trade efficiency should be taught by shop teachers or those familiar with shop practices, so that actual shop data would be used. Shop conditions must be approached as nearly as possible in the school. This being the final professional school for the industrial worker, the pupils' attendance at the school should be cut as short as may be consistent with a *thorough* training for the occupation or trade to be learned. It is also desirable that the trade should be learned as a whole and that the pupils get actual experience with all the different phases of the work. The following conditions must be met before state aid will be given for work in an all-day industrial school:

1. Not less than one-half the time of the pupil must be given to actual shop work, including such calculations and shop drawing as may be necessary to bring the projects of the pupils in the shop to successful completion.
2. The shop work must be conducted on a productive or commercial basis as distinguished from the ordinary manual training method of handling pupils in the shop.
3. The instruction must tend to become individual as distinguished from group or class instruction.
4. The shop work must be carried on as nearly like the work done in a first class commercial shop as conditions will permit.
5. The results of the pupils' work should be useful articles which can be utilized in the school system or sold in open market.
6. The assignment of work to a pupil in the shop should be by projects or jobs.
7. The progress of the pupil through the shop and school should be measured by the projects or jobs which he has completed in a satisfactory manner.
8. The classroom instruction in the related academic subjects, such as arithmetic, drawing, and science should be closely connected at every possible point with his shoproom experience, in order that it may be of immediate practical value to the pupil.
9. Every day industrial school should plan for at least a one year's course and for not more than a four years' course.

10. Every year's work should, so far as possible, be a unit unto itself. Each year's work should be organized and administered in a way that would confer upon the pupil a definite value in vocational training, so that if he should leave the school at the end of the year, the instruction could be used by him as a tool in trade for better wage earning.
11. Not less than three (60 minute) hours should be devoted each day to actual shop work. The school session should not be less than six nor more than eight hours, not counting the recess and noon periods.
12. So far as feasible instruction should be given in English, history, civics and other appropriate subjects which would tend to make the pupils self-helpful, intelligent and worthy citizens. The end of the vocational school should not be merely to produce a technically competent workmen, but a *citizen of the state* who seeks not only to advance his own welfare through his work, but who is ready and willing to place his efforts at the service of his community and state.

(2) All-Day Agricultural Schools: In the all-day agricultural school pupils must give most of their time to practical business-like work in agriculture and its related sciences. Practical problems must be worked out on a real farm under the direction of the teacher. Since most of these activities must take place during the summer months, it will be necessary for the vocational teachers in an agricultural school to be employed for the entire year, with a vacation in the winter. Their entire time during the summer should be taken up with superintending the practical work of the students. While in the winter months their time would be devoted to the home project work and to teaching the theory, and science underlying the art of farming. (See special bulletin on vocational schools for agriculture, Vocational Series No. 5.)

**(3) Day Vocational Schools or Departments for Homemaking
Include:**

- (a) Schools training for household activities in the country, including gardening, dairying, poultry, etc.
- (b) Model home schools in the city for day laborers and others.

- (e) Regulation schools for homemaking, devoting entire time to practical training for "occupations connected with the household."

(See special bulletin describing vocational schools for homemaking. Vocational series No. 6.)

b. Types of All-Day Schools Not Eligible For State Aid.

- (1) A Continuation School which devotes but a part of its time to vocational instruction and the rest to general education. Such work, though valuable and important does not come within the scope and intent of our present law. (2) Any day industrial or manual training school which does not have for its controlling purpose the fitting of its students for profitable employment in some of the occupations connected with the home, the shop or farm. (3) Schools giving general industrial or pre-vocational courses designed to enable students to test or determine their vocational aims or to lay a necessary or helpful basis for future vocational work can not be state aided under the law.

2. "Part-Time Classes" in a Vocational Department or School

A part-time class in a vocational department or school is one in which vocational instruction is given in industrial, agricultural and homemaking subjects to pupils, over fourteen and under twenty-five years of age, who are regularly and lawfully employed in these fields of work and where the instruction given is complementary to the work in which the pupils are engaged during the time they are not attending the school.¹ A class giving instruction in shop mathematics and drawing during the day to employees of a machine shop, a class giving instruction during the day in domestic science to housemaids, a class giving training in designing during the day to girls employed in dressmaking shops during the remainder of the day or week, a class receiving instruction in some agricultural subject in a school while doing active work on a farm, are all illustrations of part-time work for which state aid is provided. A class giving instructions in dressmaking to sales women or mechanical drawing, gardening or poultry raising to a group of messenger boys would, on the other hand, not come within the intent of the law for part time vocational work.

¹Membership in a part-time class must in all cases be restricted to those who are regularly employed for a part of their time in wage-earning occupations for which the school gives supplementary and related instruction. The dominant aim of the class must be to give instruction which is of direct value to the pupil for the work in which he is engaged. There is a sense in which the part-time class is a continuation school, but the continuation idea of this type of school would better be expressed if it were thought of as a Trade Continuation Class or School.

The amount and kind of instruction that may be given in a part-time class varies greatly. As to time devoted to the work five or more hours may be given to the instruction per week, a day a week or the half-time plan may be adopted, whereby alternate weeks may be given to the school and shop or farm. Whether the half-time plan or less than half-time plan should be used will depend, of course, upon the facilities which the school has for handling the classes, the amount of coöperation that can be secured from the employers concerned, the class of individuals to be served, etc.

One of the best ways that a small industrial community can provide vocational education is by the part-time plan. This provides for an equitable distribution of the responsibility for vocational education between the shop in which the pupils are employed and the school providing a few hours of instruction each week designed to make the young workers more efficient workmen and better citizens.

a. Attendance Upon Part-time Classes Compulsory.

The Indiana law provides that when "the board of education or township trustee of any city, town or township have established approved vocational schools for the instruction of youths over fourteen years of age who are engaged in regular employment, in part-time classes, and have formally accepted the provisions of this section, such board or trustee are authorized to require all youths between the ages of fourteen and sixteen years who are regularly employed, to attend school not less than five hours per week between the hours of 8 a. m. and 5 p. m. during the school term." (Sec. 11.)

b. Different Plans for Part-time Work.

The following types of part-time instruction are at present being carried on in this country, or have been proposed as practicable schemes for part-time vocational work:

(1) Plans Classified According to Responsibility of Employer.

- (a) *The No-responsibility Scheme*, in which the employer does nothing more than to organize the factory or plant so that the pupils may have time off from the shop or factory during working hours to attend the school.
- (b) *The Part-responsibility Scheme*, wherein the employer, in addition to making arrangements, so as to afford time off for the school, pays the pupil for all or a

part of the time spent in the school, i. e., pays for half or all the time lost from the business.

- (c) *The Full-responsibility Scheme* prevails when the employer, in addition to arranging his work so as to co-operate with the school, agrees with the school authorities to give the young workers an opportunity to secure the round of experiences at the different machines and processes in the shop, which will give them breadth of skill and insight as a workman and enable them to get the necessary instruction to learn the trade in the school. In most cases the learners are paid for the time they spend in the school. This plan is most often used in connection with the more important skilled industries.

(2) Plans Classified According to Time Given to Shop and School.

- (a) *The Week-about or Half-time Plan*, in which alternate weeks are given to the shop and school. This is sometimes called the two-boy plan, because it is customary to assign two boys to the same task, one working in the shop while the other goes to school and then exchanging places the next week.
- (b) *The Less Than Half-time Plan*: This includes all plans which give less than alternate weeks to vocational instruction. The work may be arranged so that the learner has eight hours each week at the school, in some cases five hours a week, in still others from two to four hours. It may readily be seen that decreasing the number of hours given to the school decreases the difficulty of securing additional help but increases the difficulty of organizing the work at the factory so as to permit the shifting of the workers in a manner necessary to permit them to attend classes.

(3) Plans Classified According to Enforcement.

- (a) *Voluntary Part-time Schooling* contents itself with providing a school to give the vocational work and persuading employers, parents and children to co-operate with the school authorities. Sometimes the employer arranges with the school authorities to

have some or all of their young workers take the training by making attendance upon the school a condition for their employment.

- (b) *Compulsory Part-time Schooling* occurs when the youth who has gone to work is compelled by law to give a part of his time to the school, and where the employer is required to arrange for time off for the class in order that the child may attend the school. This is the better plan and is the one provided for by the Indiana Law. (Compare Sec. 11.)

c. Conditions for Approval of Part-time Work.

The following considerations will guide the department and state board in approving part-time work for state aid:

1. That it is dealing with a specific group of workers whose needs it is adapted to meet.
2. That the training received is adding to the technical knowledge or skill of the worker.
3. That the instruction given is efficient.
4. That the amount of time given to the work and the amount of benefit derived from such work by the pupils is such as to justify the expenditure of state money for its support.
5. That the data for school instruction be taken directly from the practice of up to date industrial establishments.
6. That at least one study in the course deals directly with the training for citizenship.

d. Types of Part-time Classes Not Eligible for State Aid.

It will readily be seen that a part-time class which seeks primarily to extend general educational facilities to young workers for the purpose of increasing their fund of general information or which aims to give to workers vocational training designed to fit them for another higher or more remunerative occupation or trade does not fall within the scope or intent of part-time classes as defined by our law. To receive state aid for part-time work the school must give instruction in the present wage earning occupations of the pupils, instruction designed to make them more efficient and productive workmen in that occupation or trade. Schools which aim to advance the general intelligence of workers are highly

desirable and are commended to local communities by the state board. It is also important to provide a means whereby the workers who have gotten into "blind-alley" jobs, may be able to fit themselves for more skilled occupations, but a school having this for its aim cannot be state aided under the law. Only a few definite things could be taken up and encouraged by our law. It was evidently believed more important to begin by assisting the workers along the lines of their present employment than to try to help them get into another occupation, or endeavor to continue their general education in which they had already lost interest. It should also be noted that the most careful students of vocational education believe that a new occupation can not be successfully taught in a part-time or evening class because of lack of time. All these facts emphasize the importance of effective educational guidance in our public schools.

3. Evening Vocational Classes

Evening vocational classes in an industrial, agricultural or domestic science school or department are those in which instruction is given to pupils over seventeen years of age, who are regularly and lawfully employed during the day, and which in order to be called vocational must in their instruction deal with the subject matter of the day employment, but evening classes giving instruction in homemaking shall be open to all women over seventeen years of age however they may be employed during the day. This marks an important distinction between evening industrial and agricultural classes and evening classes in homemaking. No restrictions are placed upon the women as to their daily employment. No direct relation need, therefore, exist between the day employment of individuals enrolled in the evening classes in homemaking and the instruction given in these classes. The instruction in an evening class in agriculture or industrial subjects, on the other hand, must deal with the subject matter of the day employment and be so carried on as to actually increase the efficiency of the worker in his present employment.

a. General Character of the Instruction in an Evening Vocational Class.

The time available for vocational instruction in evening classes is so limited that it is impossible to teach both the theory and practice of a complete trade in an evening school. For this and

other reasons it has been found, by practical experience, that productive wage earning can best be reached by a type of instruction which will give the learner help in solving the actual problems he meets in his daily work. Courses which will help him forward a step at a time, as it were, in his mastery of that occupation. In giving instruction in evening classes to farmers, for example, such problems as the following might be taken up: Marketing farm products, selecting seed corn, keeping poultry, how to grow tomatoes, etc.

Experience has demonstrated that such short unit courses arranged to meet the specific and immediate needs of the workers provide the best means of giving the needed help. Such courses make it possible for a worker to come into the evening class, take one or more courses and withdraw without interfering with the organization of the school. The work becomes more individual and interesting. Such unit courses may be one hour, ten hours, or fifty hours in length. The following examples from representative occupations and trades will make clear what is meant:

Carpenters' Trade—

- Blue print reading for carpenters.
- Free hand drawing for carpenters.
- House framing.
- Roof framing.
- Stair building.
- Shop arithmetic for carpenters.

Machinists' Trade—

- Blue print reading for machinists.
- Free hand drawing for machinists.
- Automobile repairing.
- Bench lathe work.
- Tool making.
- Shop arithmetic for machinists.
- Forging.

Unit Courses in Cooking—

- Bread making.
- Cake making.
- Simple family meals.
- Left-overs.
- Lunches for the dinner pail.
- Feeding of children.
- Marketing.

Unit Courses in Home-making—

- Serving of meals.
- Home nursing.
- Care of children.
- Washing and ironing.

Millinery—

- Wire framing.
- Hat trimming.
- Velvet hats.

b. Types of Evening School Work That Can Not Be State Aided.

The following types of evening school work cannot be state aided under the law: (1) *The general evening school* which seeks to continue the general education of industrial and other wage earners by general or special courses of instruction. Such schools play a very important role in the school system of a city or state and should be encouraged, but the controlling purpose of an evening class in a state aided vocational school must be "to fit the worker for more profitable employment in the occupation in which he is actually engaged." (2) An evening school which provides instruction for wage earners, designed to teach them another more remunerative occupation or trade or one permitting of a higher degree of skill is not eligible for state aid. There can be no question as to the value of a school which seeks thus to benefit the individuals engaged in unskilled occupations, and who are beyond the reach of our regular schools. Such work merits a more extensive introduction throughout the state, but under our vocational education law such classes cannot be given state aid. (3) There is another type of evening school which seeks to improve a workers' trade efficiency while at the same time continuing his general education. Such a school would not be eligible to share in the state allotments, since the controlling purpose of all state aided vocational classes or schools must be to fit for profitable employment. All evening vocational classes must give instruction which will actually add to the stock in trade of a wage earner who has already entered upon the skilled calling he expects to follow as his life work. A practical farmer would not be eligible to enter a class in plumbing or a plumber a class in poultry raising or market gardening in a state aided vocational evening class.

IV. THE ORGANIZATION OF VOCATIONAL SCHOOLS

Any of the above types of vocational schools may be established (1) by a single city, town or township. (2) By the coöperation of two or more cities, towns or townships.

(1) By Single Cities, Towns or Townships: "Any school city, town or township may through its board of school trustees or school commissioners or township trustee, establish vocational schools or departments for industrial, agricultural and domestic science education in the same manner as other schools and departments are established and may maintain the same from the common school funds or from a special tax levy not to exceed 10 cents on each \$100 of taxable property, or partly from the common school fund and partly from such tax." (Sec. 2.)

(2) By Cooperation of Two or More Cities, Towns or Townships: "Two or more school cities, towns or townships or combination thereof, may coöperate to establish and maintain vocational schools or departments for industrial, agricultural or domestic science education or in supervising the same, whenever the school board or township trustees of such school cities, towns or townships shall so determine and apportion the cost thereof among the cities, towns and townships coöoperating. Whenever such co-operative schools or departments have been determined upon by any school cities, towns or townships, or combination thereof, the presidents of the school boards of the cities or towns and the township trustees of the township coöperating shall constitute a board for the management of such school or department, such board may adopt for a period of one year or more, a plan of organization, administration and support for such school or department and the plan, if approved by the state board of education, shall constitute a binding contract between cities, towns and townships entering into a coöperation to support such schools and courses which shall be cancelled or annulled only by the vote of the majority of the school boards or township trustees of such school cities, towns or townships and the approval of the state board of education." (Sec. 4.)

There are two ways in which vocational work may be organized. (1) As a separate school. (2) As a department of another school. This phase of the organization of the vocational work has already been described. (See page 17.)

1. How to Organize the Work in a Vocational School

The most successful way of administering vocational education thus far tried is to organize the work of the school by departments

A vocational school thus organized would consist of a series of schools within a school, each such department or school fitting for a different vocation, such as a department of carpentry, a department of plumbing, a department of printing, a department of millinery, a department of dressmaking. This plan requires that there be a separate organization of curricula, pupils and teachers, under a separate vocational teacher or director for each vocation taught in the school, the course of study for each department being so planned that the instruction given would bear directly upon the particular occupation taught. Schools and departments so organized will have established, in the judgment of the board, a presumption in favor of efficient work.

2. How to Start Vocational Work in a Given Community

a. *The Preliminary Survey.*

The first step in the establishment of a vocational department or school is to make a preliminary investigation to determine:

1. If there is a well defined need for a vocational department or school in that community.
2. For what industries or occupations the proposed department or school should prepare.

This may be done (1) by ascertaining what has become of the boys and girls who left school at fourteen years of age and determining which forms of vocational education, industrial, agricultural or household arts, would best meet their needs. (2) By listing the predominant industries of the community and ascertaining whether or not these offer opportunities for skilled employment and proper inducements for a permanent occupation. (3) By ascertaining the facilities already available for giving vocational instruction in the occupations and industries represented in the community.

3. It should next be determined to what extent the employers will coöperate with the local school authorities in providing the vocational training most needed in that community.
4. It must finally be determined whether an all-day school, part-time or evening classes will best meet the needs of this particular community.

Such a preliminary investigation should be carried on by the local school authorities or by a committee appointed by them (Board of Trade, Chamber of Commerce, Civic Club, Central Labor

Union), working in coöperation with the state board of education. The department of public instruction will render whatever assistance it can to any committee making such an investigation and may, in some instances, make the investigation, if requested by the local authorities to do so.

A plan that has proven very successful in arousing interest in the vocational work is to appoint a local commission on vocational education to study the problem and coöperate with the state department in making such investigation. Such local commission might well consist of employers and employes representing the industries of the locality, of women of experience in social and industrial activities, representatives of local civic and social organizations, and members of boards of education, and might be continued as a permanent development committee for vocational education in that community. Such a *commission* should, however, not be confused with the advisory committee to be appointed for each vocational school described below.

After this preliminary investigation has been made, and if it should be shown that there is sufficient need for a vocational department or school, the following additional steps must be taken:

1. The selection of a director or head for the vocational work.
2. The appointment of an advisory committee for the school, representing the local trades, industries and occupations for which the school or department is to prepare.
3. The arrangement of a course of study.
4. The securing of a building suitable to meet the needs of the school and equipping it with the necessary machinery and furniture.
5. The employment of properly qualified teachers to give the necessary instruction.

b. The Appointment of the Advisory Committee.

“Boards of education or township trustees administering approved vocational schools and departments for industrial, agricultural or domestic science education, shall, under a scheme to be approved by the state board of education, appoint an advisory committee composed of members representing local trades, industries and occupations.” (Sec. 9.)

The state board of education will require that such an advisory committee be appointed by the local school board for each separate

vocational department or school established. While such a committee does not have any authority under the law except to advise and coöperate with the local school authorities carrying on the work, it is, nevertheless, believed that the advice of such a committee representative of the particular vocations for which the school prepares is absolutely necessary to make the instruction efficient and economic. This committee will bring to the service of the school a knowledge of the demands made upon the workers in the occupations taught in the school and can, in many cases, offer valuable suggestions as to organization, equipment, course of study and methods of instruction. Experience has shown that it is impossible to bring about the close relation between the industries and the vocational schools which should exist for efficient work without the aid of such a committee. Such advisory committee should serve not merely as a censor for the work but as a developmental committee for the department or school.

c. Desirable Composition and Duties of Advisory Committee.

The advisory committee for a vocational school training for industrial pursuits, should be made up of at least two persons (one of whom shall be an employer and one an employe) representing each distinct occupation or trade taught, such as metal-working, wood-working, painting, printing, dressmaking, millinery. The advisory committee for a school or department training for home-making should be made up of not less than three nor more than five persons who have had actual experience in the occupations carried on in the household. The advisory committee for an agricultural department or school must be made up of at least three successful farmers taken from the locality served by the school. It would be advisable if these members represented the different lines of agricultural activities taught in the school.

The principal in charge of the vocational school or the director of a vocational department in another school, together with the superintendent of schools should be *ex officio* members of the advisory committee. The director or principal teacher of the vocational department or school should be permanent secretary of the advisory committee, and keep a permanent record of the committee's work.

The advisory committee should, in addition to its other services, hold stated meetings for the purpose of discussing and advancing the interests and work of the school. Its organization and membership should be reported to the state board of education on blanks furnished for this purpose.

V. THE ADMINISTRATION OF VOCATIONAL SCHOOLS

1. Local Supervision and Support

a. Local Support.

Local school authorities are given full power to establish and maintain vocational departments and schools as already pointed out. They must provide the necessary money for the purchase or rental of lands and buildings adapted to the needs of the vocational department or school to be established, also pay the cost of all necessary equipment. They have entire responsibility for the conduct of the work, and must be the initiators in every case. The state supervises the work, assists in the establishment and conduct of the school by setting standards, approving the work and paying two-thirds the cost of the vocational instruction.

b. Local Supervision.

In the organization of a vocational school or in the conduct of the vocational work in any community the following body of workers or divisions of responsibility and work will be found:

- (1) The superintendent of the city schools.
- (2) The assistant superintendent having special responsibility for vocational education in the larger centers.
- (3) The special director for the vocational school.
- (4) The principal of the separate building in which there is a department of vocational training.
- (5) The heads of separate departments in a vocational school or department.
- (6) The instructors in vocational, special technical and academic subjects in the vocational school.

Not all these elements will be present in every vocational department or school, but in every given system administering vocational education it will be easy to analyze the duties of these different administrative officers and to place them in the proper position. In a small rural school, for example, with a vocational department in agriculture, the responsibility given to the six different officials in a large system would all rest on the principal of the school, or perhaps on the instructor of agriculture.

The ultimate responsibility for the success of the school rests on the superintendent and local school board, but this responsibility should filter downward through the superintendent and various

school officers named above to the individual instructors that actually do the work, the same as in the administration of our regular schools. It is very desirable that the vocational work be put upon a high professional basis from the start and be administered according to the best known practices.

2. State Supervision and Support

a. State Support.

As already pointed out the state proposes to enter into a joint partnership with the local community for the purpose of securing an effective plan for vocational education. "The state, in order to aid in the maintenance of approved vocational schools or departments for industrial, agricultural and domestic science education shall, as provided in this act, pay annually to school cities and towns and townships maintaining such schools and departments an amount equal to two-thirds of the sum expended for instruction in vocational and technical subjects authorized and approved by the state board of education. Such cost of instruction shall consist of the total amount raised by local taxation and expended for the teachers of approved vocational and technical subjects." (Sec. 14.)

b. Reimbursement for Transfer Pupils.

Other claims for reimbursement occur when pupils are transferred from their home district to another school to receive vocational training. In all such cases the "school cities, towns and townships that have paid claims for tuition in approved vocational schools shall be reimbursed by the state as provided in this act, to the extent of one-half the sums expended by such school cities and towns and townships in payment of such claims." (See Sec. 14.)

c. Special Provisions for Non-Resident Pupils. -

There will probably be school districts in which for good reasons it is not advisable to establish vocational schools; there may also be instances where a pupil desires instruction in a vocation for which no provision is made in the vocational school maintained by the local board. The needs of such pupils and districts have been met by the law in the following way:

"Any resident of any city, town or township in Indiana, which does not maintain an approved vocational school or department for industrial, agricultural or domestic science

education offering the type of training which he desires, may make application for admission to such school or department maintained by another city, town or township or any school of secondary grade maintaining an approved industrial, agricultural or domestic science school or department. The state board of education, whose decision shall be final, may approve or disapprove such application. In making such decision the board shall take into consideration the opportunities for free vocational training in the community in which the applicant resides; the financial status of the community; the age, sex, preparation, aptitude and previous record of the applicant, and all other relevant circumstances.

The school city or town or township in which the person resides, who has been admitted as above provided, to an approved vocational school or department for industrial, agricultural or domestic science education, maintained by another city, town or township or other school, shall pay such tuition fee as may be fixed by the state board of education; and the state shall reimburse such school city or town or township as provided for in this act. If any school city or town or township neglects or refuses to pay for such tuition, it shall be liable therefor in an action of contract to the school city or town or township or cities and towns and townships or other school maintaining the school which the pupil with the approval of the said board attended." (Sec. 10.)

In making its final decision on such cases of transfer, the state board of education will, of course, take into consideration the opportunities for free vocational training in the community in which the applicant resides; the financial status of the community, the age, sex, preparation, aptitude, and previous record of the applicant and all other relevant circumstances. It will not be the policy of the state board to require a local board of school directors to admit a person from another district to its vocational school if they have sufficient reasons for not admitting such applicant.

d. Time of Giving State Moneys.

On or before the first of July following the completion of the work for any school year, the school authorities of each district maintaining approved vocational schools or departments shall pre-

sent to the superintendent of public instruction a sworn statement, on blanks furnished by the department for the purpose, of the amount actually expended for vocational instruction during the preceding year. All claims for reimbursement will be paid upon the basis of such sworn statement. The state board, if they approve the claim, will authorize the auditor of state to draw his warrant on the treasurer of state for the payment of the amount due such school city, town or township. All claims will be paid as soon after the receipt of such statement as possible.

3. Vocational Departments and Schools Must Be Approved By the State Board of Education

“Vocational schools or departments for industrial, agricultural and domestic science education shall so long as they are approved by the state board of education as to organization, location, equipment, courses of study, qualifications of teachers, methods of instruction, conditions of admission, employment of pupils and expenditures of money, constitute approved vocational schools or departments. School cities and towns and townships maintaining such approved vocational schools shall receive reimbursement”—as provided in Section 14 of the Law quoted above.

The state has entered into a *joint partnership* with the local community for the purpose of securing an effective plan for vocational training. The local community actually carrying on the work is the resident partner, and the state is the non-resident partner interested in the results of the venture in which it invests its money each year. The local community, or resident partner, initiates or proposes every step that is taken, such as choice of a site for a school building, teachers, etc. The state as a non-resident partner, through its representatives from the state board discusses the proposals of the representatives of the local board, inspects, approves or disapproves and sends money to those partnership ventures which it finds worthy of support.

a. Methods of Inspection.

Two methods of inspection and approval of a vocational department or school are, therefore, possible: (1) The method of formal inspection and approval. (2) The method of approval in advance.

(1) Formal Inspection and Approval: Local school committees have the power, under the law, to establish and maintain

vocational instruction without seeking preliminary approval of its organization, its course of study or method by which the work shall be conducted. They may prefer to seek later the approval of the state department and the state board of education. This procedure might be called the method of formal inspection and approval. Some time during the year the representatives of the state board would be asked to visit the school for the purpose of investigating its work in order to find out whether it was satisfactory and whether it was entitled to state aid, such annual visits forming the only connection between local and state authorities in carrying on the work. While the plan is plausible and while the state board would be willing to deal with a school by this form of inspection and approval, the plan is *very objectionable* from every standpoint. Should the work be found unsatisfactory, it would be too late to make the changes necessary to receive the apportionment for that current year. The school might, therefore lose the state aid to which it would otherwise be entitled, and it would fail, in many cases, to do the kind of work which the state wishes to stimulate and encourage.

(2) **The Method of Approval in Advance**, requires at every step in the organization and administration of vocational schools a policy of close and intimate coöperation between local and state authorities with regard to every feature of the work. Frequent consultations and conferences between those in charge of the school and the department of public instruction would enable local authorities to avail themselves, as often as might be necessary, of the advice and assistance of the state department. In this way the state board would be kept constantly informed of the lines of action considered by the school at each stage in its development and the state department could indicate promptly its approval or disapproval of the plans prepared by the local authorities. In this way the work of the school could be shaped from time to time to meet the requirements of the state board of education, which would be in a position to give its prompt and intelligent approval annually. The state board believes the method of *approval in advance* to be the *only safe and satisfactory way* to deal with state aided vocational schools and strongly urges local school authorities to adopt it.

But, notwithstanding, this advice and approval in advance of plans, organization, course of study, etc., the department reserves the right to inspect the work *actually done* by the school, basing

its final approval for state aid upon the actual accomplishment of the department or school. In view of the fact that the standards and requirements set up by the state authorities must be changed from time to time, in order to keep the work in the state abreast of the best thought and practices, it is necessary that all state aided vocational departments and schools be inspected each year before they can be approved for reimbursement.

4. Standards That Must Be Met By Approved Vocational Schools

a. Essentials in Organization.

These have already been described somewhat in detail in other sections of this bulletin. No rigid plan of organization suitable for all communities in the state can be outlined. In general the most effective organization, where more than one vocation is taught in the school, is the departmental system already described. Under such an arrangement each department should be under the direction of an expert. These experts should be responsible to the director of the vocational school for the output of their departments and free to use their own initiative in planning the work, so long as it is in keeping with the general policy of the school. The director should be responsible to the superintendent, or local school board for the school as a whole, and should be given authority commensurate with his responsibility.

Each school or department must have a separate organization and head, an advisory committee and be open to all pupils over fourteen years of age able to profit by the instruction, as already pointed out.

(1) **Location and Buildings:** The location of the school should be such that the majority of the pupils which it serves can reach it conveniently. The building must be suitable for the purpose for which it is to be used. A vocational department or school may be in a separate building adapted to the use of the school, or in special rooms of a regular school if suitably equipped and arranged to carry on the vocational work, as already described.

(2) **Equipment:** The general and special equipments must be adequate to meet the demands of the vocations prepared for in the school. The general equipment includes desks, charts, blackboards, reference books and other apparatus necessary to demonstrate the scientific and technical principles taught. The provi-

sions for text book instruction should be supplemented by bulletins, trade magazines, reference books, publications from business houses, exhibits of processes and materials contributed by manufacturers. Technical magazines should be found in the school library. *Special equipment* includes the machinery, tools and special appliances needed. These must be sufficient to keep the instruction abreast of the best commercial practices.

b. Character of Instruction.

(1) Course of Study: In general the course of study and methods of instruction in a vocational school must be such that the needs of the pupils are met in an effective manner. To meet the approval of the state board of education vocational departments and schools should, in their courses of study and methods of instruction, conform to the following fundamental principles.

1. The school should in general give training for the leading skilled occupations of the community because such a course would meet the needs of the greatest number of people.
2. Since the dominant purpose of the vocational school is to prepare for successful wage earning, it must fit its pupils to meet successfully the demands made by the particular trades or occupations taught. This means that we must go to the industry or occupation for which the school seeks to prepare to find out what the requirements in that field of work really are, to determine what is needed to make an efficient worker in that field, then formulate our course of study and work with a view of meeting these requirements and needs.
3. The practical and shop work should be closely correlated with the technical and academic work.
4. The mathematics, drawing, and science subjects should be taught in a way that will be practically useful to the pupils in the particular occupations for which they are being trained. These relations must be worked out by the individual teachers, as no text books or teaching helps are at present available.
5. The shop and laboratory work in a vocational school must be as nearly like the conditions and work in

- a modern up to date shop or business establishment as possible.
6. So far as feasible, instruction in English, history, science and other appropriate subjects should be given which will tend to make the pupils self-helpful, intelligent and worthy citizens.
 7. The course of study should be so arranged that each years' work, while immediately preparing for the next, would, nevertheless, be a unit unto itself, conferring upon the pupil a definite value which would add to his stock in trade as a worker if he should leave the school at the end of the year. The dominant characteristics of the instruction in the evening and part-time classes has already been described. (See pages 24-25.)
 8. The course of study in the all-day school should include the following: (1) Practical instruction in the particular trade or occupation studied. At least half the pupils' time must be given to actual work in the shop or on the farm operated on a commercial basis. (2) Technical and other subjects bearing directly upon the occupations studied, work in mathematics, drawing, science and technique, which applies directly to the chosen occupation and which is required to give the pupil the necessary insight and mastery of that occupation. (3) Instruction in academic subjects which train for intelligent citizenship, reading, English, industrial history, etc.

The three necessary elements in any vocational course, therefore, are (1) The practical instruction in the occupation or trade for which the school prepares. (2) The knowledge and theory which lies back of the best practice in his field of work. (3) The preparation for intelligent and worthy citizenship.

(2) Qualifications of Teachers: No person will be eligible to teach in a state aided vocational school who does not hold a legal certificate. The plans for licensing teachers for vocational schools will be formulated later. Four classes of teachers for vocational schools will be recognized.

(a) *Principals and Directors* who are employed in administrative or executive capacities. The principal or director of a voca-

tional school should have had a thorough academic training and, preferably, experience with different lines of public school work. He must be in sympathy with vocational education, have the vocational point of view, and sufficient technical and practical knowledge to enable him to administer the vocational work.

(b) *Special Teachers for the Shop and Vocational Subjects.* These *vocational* teachers must have a first hand knowledge of the trades or occupations they teach and should be masters of the entire occupation or trade. They must have filled acceptably a similar position in the industries or must have had such intensive school and shop training as to place them on a par with the best tradesmen or skilled workers in the particular trade or occupation which they teach. This experience and training should be supplemented at frequent intervals by actual work in commercial shops when the school is not in session.

(c) *Technical Teachers*, who teach subjects directly and vocationally related to the trade subjects, as shop mathematics, shop drawing and applied science. These teachers should have an intimate knowledge of their subject gained through actual experience with the shop work to which they are relating the technical subjects. Experience has shown that recent shop experience is needed to teach these technical subjects in the most helpful way.

(d) *Academic Teachers*, who teach subjects indirectly related to the practical subjects, such as English, history and hygiene. Such teachers must be in sympathy with vocational education and with the aims of the school and be able to appeal to the interests and needs of their pupils.

In beginning the vocational work one or all of these teaching functions may fall upon one person, who may be required to give all the work in preparation for a particular occupation. In such cases special care must be exercised on the part of the local school authorities to secure a man who can really do the work required in such a department or school. In all such cases a vocational or shop teacher should be placed in charge of the department.

c. Other Standards and Uniform Requirements.

(1) **Entrance Requirements:** Day vocational schools or departments are open to all pupils over fourteen years of age and under twenty-five who are able to profit by the instruction offered. Part-time classes are open to persons over fourteen years of age and under twenty-five who are lawfully employed during the day.

Evening vocational classes are open to persons over seventeen years of age who are regularly employed. In an agricultural or industrial evening class the work must deal with the subject-matter of the day employment of the pupils. Evening classes in "domestic science" are open to all women over seventeen years of age irrespective of how they are employed during the day.

(2) **Reports:** Periodical reports from vocational schools will be helpful to the department, and definite yearly reports must be made upon blanks provided for the purpose.

(3) **Number of Pupils:** Experience has shown that *fifteen* is the lowest number of pupils with which a vocational school may be operated and return a reasonable amount of service to the state and the community for the money invested. In the case of a vocational *department* the number should not fall below twelve. In order to be counted as enrolled in a vocational school or department a pupil must be following the course of study approved by the state board of education.

d. Modification of Rules.

Notwithstanding the principles and standards set up in this bulletin the state board will at all times consider each application for state aid on its individual merits, taking into account the resources of the district proposing to organize vocational schools, the needs of the community, the character of the population and any other circumstances affecting the work.

All communications concerning vocational schools or departments should be addressed to the Vocational Division, Department of Public Instruction.

VI. THE INDIANA VOCATIONAL EDUCATION LAW

[HOUSE BILL 101.]

AN ACT to provide for the encouragement, maintenance and supervision of vocational education in industries, agriculture and domestic science.

[Approved February 22, 1913.]

SECTION 1. *Be it enacted by the general assembly of the State of Indiana,* The following words and phrases as used in this act shall, unless a different meaning is plainly required by the context, have the following meanings:

VOCATIONAL EDUCATION DEFINED.

1. "Vocational education" shall mean any education the controlling purpose of which is to fit for profitable employment.
2. "Industrial education" shall mean that form of vocational education which fits for the trades, crafts and wage-earning pursuits, including the occupation of girls and women carried on in stores, workshops, and other establishments.
3. "Agricultural education" shall mean that form of vocational education which fits for the occupations connected with the tillage of the soil, the care of domestic animals, forestry and other wage-earning or productive work on the farm.
4. "Domestic science" education shall mean that form of vocational education which fits for occupations connected with the household.
5. "Industrial, agricultural or domestic science school or department" shall mean an organization of courses, pupils and teachers designed to give either industrial, agricultural or domestic science education as herein defined, under a separate director or head.
6. "Approved industrial, agricultural or domestic science school or department" shall mean an organization under a separate director or head, of courses, pupils and teachers approved by the state board of education designed to give either industrial, agricultural or domestic science education as herein defined.
7. "Evening class" in an industrial, agricultural or domestic science school or department shall mean a class giving such training as can be taken by persons already employed during the working day, and which in order to be called vocational must in its instruction deal with the subject-matter of the day employment, and be so carried on as to relate to the day employment; but evening classes in domestic science relating to the home shall be open to all women over seventeen who are employed in any capacity during the day.
8. "Part-time classes" in an industrial, agricultural or domestic science school or department, shall mean a vocational class for persons giving a part of their working time to profitable employment and receiving in the part-time school or department, instruction complementary to the practical work carried on in such employment. To give a part of their working time such persons must give a part of each day, week or longer period to such part-time class during the period in which it is in session.

ORGANIZATION OF VOCATIONAL SCHOOLS.

SEC. 2. Any school city, town or township may through its board of school trustees or school commissioners or township trustee, establish vocational schools or departments for industrial, agricultural and domestic science education in the same manner as other schools and departments are established and may maintain the same from the common school funds or from a special tax levy not to exceed 10 cents on each \$100 of taxable property, or partly from the common school funds and partly from such tax. School cities, towns and townships are authorized to maintain and carry on instruction in elementary domestic science, industrial and agricultural subjects as a part of the regular course of instruction.

KINDS OF VOCATIONAL SCHOOLS.

SEC. 3. In order that instruction in the principles and practice of the arts may go on together, vocational schools and departments for industrial, agricultural and domestic science education may offer instruction in day, part-time and evening classes. Such instruction shall be of less than college grade and be designed to meet the vocational needs of persons over 14 years of age who are able to profit by the instruction offered. Attendance upon such day or part-time classes shall be restricted to persons over 14 and under 25 years of age; and upon such evening classes to persons over 17 years of age.

CO-OPERATIVE SCHOOLS.

SEC. 4. Two or more school cities, towns or townships or combinations thereof, may co-operate to establish and maintain vocational schools or departments for industrial, agricultural or domestic science education or in supervising the same, whenever the school board or township trustees of such school cities, towns or townships shall so determine and apportion the cost thereof among the cities, towns and townships co-operating. Whenever such co-operative schools or departments have been determined upon by any school cities, towns or townships, or combination thereof, the presidents of the school boards of the cities or towns and the township trustees of the townships co-operating shall constitute a board for the management of such school or department, such board may adopt for a period of one year or more, a plan of organization, administration and support for such school or department and the plan, if approved by the state board of education, shall constitute a binding contract between cities, towns and townships entering into a co-operation to support such schools and courses which shall be cancelled or annulled only by the vote of a majority of the school boards or township trustees of such school cities, towns or townships and the approval of the state board of education.

PRE-VOCATIONAL WORK.

SEC. 5. Elementary agriculture shall be taught in the grades in all town and township schools; elementary industrial work shall be taught in the grades in all city and town schools, and elementary domestic science shall be taught in the grades in all city, town and township schools. The state board of education shall outline a course of study for each of such

grades as they may determine which shall be followed as a minimum requirement. The board shall also outline a course of study in agriculture, domestic science and industrial work, which they may require city, town and township high schools to offer as regular courses. After September 1, 1915, all teachers required to teach elementary agriculture, industrial work or domestic science shall have passed an examination in such subjects prepared by the state board of education

DUTIES OF STATE BOARD OF EDUCATION.

SEC. 6. The state board of education is hereby authorized and directed to investigate and to aid in the introduction of industrial, agricultural and domestic science education, to aid cities, towns and townships to initiate and superintend the establishment and maintenance of schools and departments for the aforesaid forms of education; and to supervise and approve such schools and departments, as hereinafter provided. The board of education shall make a report annually to the general assembly describing the condition and progress of industrial, agricultural and domestic science education during the year and making such recommendations as they may deem advisable.

COMPOSITION OF STATE BOARD OF EDUCATION.

SEC. 7. The state board of education shall consist of the superintendent of public instruction, the presidents of Purdue university, the State university and the State normal school, the superintendents of schools of the three cities having the largest enumeration of children for school purposes annually reported to the state superintendent of public instruction, as provided by law, three citizens actively engaged in educational work in the state, at least one of whom shall be a county superintendent of schools, and three persons actively interested in, and of known sympathy with, vocational education, one of whom shall be a representative of employes and one of employers.

The governor shall appoint the members of the board, except the ex officio members, for a term of four years.

In the first instance one member shall be appointed for two years, one for three years and one for four years. The present appointive members shall serve until the expiration of the time for which they were appointed. The governor shall fill all vacancies occurring in the board for the unexpired term, and each member shall serve until his successor shall have been appointed and qualified.

The superintendent of public instruction shall, ex officio, be president of the board, and in his absence the members present shall elect a president pro tempore. The board shall elect one of its members secretary and treasurer, who shall have the custody of its records, papers and effects, and shall keep minutes of its proceedings. The records, papers, effects and minutes shall be kept at the office of the superintendent, and shall be open for inspection. The board shall meet upon the call of the president, or a majority of its members, at such place in the state as may be designated in the call. They shall adopt and use a seal, on the face of which shall be the words "Indiana state board of education," or such other device or motto

as the board may direct, an impression and written description of which shall be recorded on the minutes of the board and filed in the office of the secretary of state, which seal shall be used for the authentication of the acts of the board and the important acts of the superintendent of public instruction.

The board shall have all the powers and perform all the duties now imposed by law on the state board of education.

APPOINTMENT OF VOCATIONAL DIRECTOR AND AGENTS.

SEC. 8. The state superintendent of public instruction, with the advice and approval of the state board of education, shall appoint a deputy superintendent in charge of industrial and domestic science education who shall act under the direction of the state superintendent of public instruction in carrying out the provisions of this act. The salary and term of office of such deputy shall be fixed by the board and he shall be removable by the board only for cause.

The state superintendent, with the approval of the state board of education, is authorized to co-operate with Purdue university in the appointment of some person actively connected with the agricultural extension work at Purdue as an agent in supervising agricultural education, who shall serve in a dual capacity as an agent of the state superintendent and an assistant at Purdue university. The board and the authorities of Purdue university may fix the proportion of the salary of such agent to be borne by the state and by the university. Such person shall be subject to removal for cause by the state board of education.

All expenses incurred in discharge of their duties by deputies and agents shall be paid by the State from funds provided for in this act.

ADVISORY COMMITTEE.

SEC. 9. Boards of education or township trustees administering approved vocational schools and departments for industrial, agricultural or domestic science education, shall, under a scheme to be approved by the state board of education, appoint an advisory committee composed of members representing local trades, industries and occupations. It shall be the duty of the advisory committee to counsel with and advise the board and other school officials having the management and supervision of such schools or departments.

PROVISIONS FOR NON-RESIDENT PUPILS.

SEC. 10. Any resident of any city, town or township in Indiana, which does not maintain an approved vocational school or department for industrial, agricultural or domestic science education offering the type of training which he desires, may make application for admission to such school or department maintained by another city, town or township or any school of secondary grade maintaining an approved industrial, agricultural or domestic science school or department. The state board of education, whose decision shall be final, may approve or disapprove such application. In making such decision the board shall take into consideration the opportunities for free vocational training in the community in

which the applicant resides; the financial status of the community; the age, sex, preparation, aptitude and previous record of the applicant, and all other relevant circumstances.

The school city or town or township in which the person resides, who has been admitted as above provided, to an approved vocational school or department for industrial, agricultural or domestic science education, maintained by another city, town or township or other school, shall pay such tuition fee as may be fixed by the state board of education; and the state shall reimburse such school city or town or township as provided for in this act. If any school city or town or township neglects or refuses to pay for such tuition, it shall be liable therefor in an action of contract to the school city or town or township or cities and towns and townships or other school maintaining the school which the pupil with the approval of the said board attended.

PART-TIME WORK COMPULSORY.

SEC. 11. In case the board of education or township trustee of any city, town or township have established approved vocational schools for the instruction of youths over fourteen years of age who are engaged in regular employment, in part-time classes, and have formally accepted the provisions of this section, such board or trustee are authorized to require all youths between the ages of fourteen and sixteen years who are regularly employed, to attend school not less than five hours per week between the hours of 8 a. m. and 5 p. m. during school term.

COUNTY AGENTS OF AGRICULTURE.

SEC. 12. Whenever twenty or more residents of a county, who are actively interested in agriculture, shall file a petition with the county board of education for a county agent, together with a deposit of \$500.00 to be used in defraying expenses of such agent, the county board of education shall file said petition, within thirty days of its receipt, with the county council, which body shall, upon receipt of such petition, appropriate annually the sum of \$1,500.00 to be used in paying the salary and other expenses of said county agent. When the county appropriation has been made the county board of education shall apply to Purdue university for the appointment of a county agent whose appointment shall be made annually and be subject to the approval of the county board of education, and the state board of education. When such appointment has been made, there shall be paid annually from the state fund provided for in this act, to Purdue university, to be paid to the county providing for a county agent, an amount sufficient to pay one-half the annual salary of the county agent appointed as herein provided: *Provided*, That not more than \$1,000 shall be appropriated to any one county: *Provided, further*, That not more than thirty (30) counties during the year ending September 30, 1914; and sixty (60) counties during the year ending September 30, 1915, shall be entitled to state aid. It shall be the duty of such agent, under the supervision of Purdue university, to co-operate with farmers' institutes, farmers' clubs and other organizations, conduct practical farm demonstrations, boys' and girls' clubs and contest

work and other movements for the advancement of agriculture and country life and to give advice to farmers on practical farm problems and aid the county superintendent of schools and the teachers in giving practical education in agriculture and domestic science. The county board of education is hereby authorized to file monthly bills covering salary and expenses of county agent, the same to be approved by Purdue university, with the county auditor who shall draw his warrant or warrants on the county treasurer for the payment of same.

CITIES AND TOWNS REIMBURSED BY THE STATE.

SEC. 13. Vocational schools or departments for industrial, agricultural and domestic science education shall so long as they are approved by the state board of education as to organization, location, equipment, courses of study, qualifications of teachers, methods of instruction, conditions of admission, employment of pupils and expenditures of money, constitute approved vocational schools or departments. School cities and towns and townships maintaining such approved vocational schools shall receive reimbursement as provided in this act.

STATE MAINTENANCE.

SEC. 14. The state, in order to aid in the maintenance of approved vocational schools or departments for industrial, agricultural and domestic science education, shall, as provided in this act, pay annually to school cities and towns and townships maintaining such schools and departments an amount equal to two-thirds of the sum expended for instruction in vocational and technical subjects authorized and approved by the state board of education. Such cost of instruction shall consist of the total amount raised by local taxation and expended for the teachers of approved vocational and technical subjects. School cities and towns and townships that have paid claims for tuition in approved vocational schools shall be reimbursed by the state as provided in this act, to the extent of one-half the sums expended by such school cities and towns and townships in payment of such claims.

CLAIMS FOR REIMBURSEMENT.

SEC. 15. Any school city, town or township having claims for reimbursement against the state under the provisions of this act shall present the same to the state board of education on or before July 1st of each year immediately following the completion of the work for which they are entitled to reimbursement from the state. The board shall if they approve the claim authorize its payment by the auditor of state, who shall thereupon draw his warrant on the treasurer of state for the payment of the amount due such school city, town or township, from the fund provided in this act.

SPECIAL TAX LEVY FOR VOCATIONAL WORK.

SEC. 16. To provide a state fund to carry out the provisions of this act, there shall be levied annually as a part of the state common school levy an additional levy of one cent on each one hundred dollars of taxable

property in the state, which shall constitute a fund for the purposes of this act. Any part of the fund remaining at the close of any fiscal year shall be placed by the treasurer of state in a permanent fund for vocational education, the proceeds of which shall be used to aid in carrying out the provisions of this act.

PAYMENT OF SALARIES AND EXPENSES.

SEC. 17. A sum sufficient to pay the salaries and expenses of the deputies, agents and employes in carrying out the provisions of this act, and an amount sufficient to carry out the provisions of Section 12 is hereby appropriated annually for two years, to be available on and after April 1, 1913. Thereafter all salaries and expenses shall be paid from the fund provided for in this act.

WHEN EFFECTIVE.

SEC. 18. This act shall take effect as to the provisions for state aid to approved vocational schools at the beginning of the school year 1914-1915. All other provisions of this act, including the provisions for a county agent, as provided in section 12, shall be in force from and after its publication.

REPEAL.

SEC. 19. All laws and parts of laws in conflict herewith are hereby repealed.

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